1 **REMARKS**

2 These remarks follow the order of the paragraphs of the office action. Relevant portions of the

3 office action are shown indented and italicized.

4 *DETAILED ACTION*

5 *1. This action is responsive to communications through the applicants application filed*
6 *on April 1, 2004.*

7 ***Information Disclosure Statement***

8 *2. IDS submitted April 1, 2004 has been considered by examiner. A signed and initiated*
9 *copy is attached hereto.*

10 *Claim Objections*

11 *3. Claims 1-4, 14-17 are objected to because of the following informalities: Claim 1*
12 *recites The Xpath is partially established woth respect to a given XML event". Examiner*
13 *believes it is a typing typo and suggests the "woth" should be changed to "with" or*
14 *appropriate correction. Appropriate correction is required.*

15 In response, the applicants respectfully state that claim 1 is amended to replace the 'woth' with the

16 word 'with. This overcomes the objection to Claims 1-4, 14-17.

17 ***Claim Rejections -35 USC §112***

18 *4. The following is a quotation of the second paragraph of 35 U.S.C. 112: The*
19 *specification shall conclude with one or more claims particularly pointing out and*
20 *distinctly claiming the subject matter which the applicant regards as his invention.*

21 *Claims 18, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being*
22 *indefinite for failing to particularly point out and distinctly claim the subject matter*
23 *which applicant regards as the invention.*

24 *Claim 18 recites the limitation "a computer to effect the functions of claim 5 in line 6.*
25 *There is insufficient antecedent basis for this limitation in the claim. For purpose of*
26 *examination, the examiner presumes the phrase should read, a computer to effect the*
27 *Xpath evaluating apparatus of claim 5".*

1   In response, the applicants respectfully state that claim 18 is amended to replace the word

2   'functions' with the words 'Xpath evaluating apparatus'. This overcomes the rejection to Claim 18

3   under 35 U.S.C. 112, second paragraph.

4   *Clam 19 recites the limitation "a computer to effect the functions of claim 8 "in line 6.*
5   *There is insufficient antecedent basis for this limitation in the claim. For purpose of*
6   *examination, the examiner presumes the phrase should read, a computer to effect the*
7   *Xpath evaluating apparatus of claim 8.*

8   In response, the applicants respectfully state that claim 19 is amended to replace the word

9   'functions' with the words 'Xpath evaluating apparatus'. This overcomes the rejection to Claim 19

10 under 35 U.S.C. 112, second paragraph.

11   *Claim 20 recites the limitation "a computer to effect the functions of claim 10" in line 6,*
12   *There is insufficient antecedent basis for this limitation in the claim. For purpose of*
13   *examination, the examiner presumes the phrase should read, "a computer to effect the*
14   *information processing apparatus of claim 10".*

15 In response, the applicants respectfully state that claim 20 is amended to replace the word

16 'functions' with the words 'information processing apparatus'. This overcomes the rejection to

17 Claim 20 under 35 U.S.C. 112, second paragraph.

18   ***Claim Rejections -35 USC §101***

19   *5. 35 U.S.C. 101 reads as follows: Whoever invents or discovers any new and useful*
20   *process, machine, manufacture, or composition of matter, or any new and useful*
21   *improvement thereof, may obtain a patent thereto,, subject to the conditions and*
22   *requirements of this title.*

23   *Claims 5-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed*
24   *to non-statutory subject matter.*
25   *The claims 5-13 recite the limitations of an apparatus. However, the claims lack*
26   *necessary physical articles or objects to constitute a machine or a manufacture within the*
27   *meaning of 35 USC 101. As such, they fail to fall within a statutory category. They are,*
28   *at best, functional descriptive material per se.*

1 In response, the applicants respectfully state that Claims 5-13 are amended to overcome the

2 rejection under 35 U.S.C. 101, so that each claimed invention is directed to statutory subject

3 matter.

4   *The claim 14 recites the limitation of "a program for controlling a computer to evaluate*
5   *the Xpath". The program is software per se. The software claims cannot be patented.*

6 In response, the applicants respectfully state that claim 14 is amended to include the program is

7 <u>embodied in a tangible computer readable medium, and employed</u> ... ... , so that the claimed

8 invention is directed to statutory subject matter. This overcomes the rejection of claim 14 under

9 35 U.S.C. 101.

10 ***Claim Rejections -35 USC § 102***

11   *6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that*
12   *form the basis for the rejections under this section made in this Office action: A person*
13   *shall be entitled to a patent unless -*
14   *(a) the Invention was known or used by others in this country, or patented or described in*
15   *a printed publication In his or a foreign country. before the invention thereof by the*
16   *applicant for a patent.*

17   *7. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Peng et al.*
18   *(Xpath Queries on Streaming Data, International Conference on Management of Data,*
19   *Proceedings of the 2003 ACM SIGMOD international conference on Management of*
20   *data, published on June 9-12, 2003).*

21 In response, the applicant respectfully states that Claims 1 - 20 are apparently not anticipated by

22 the invention of Peng. The present invention, claimed in Claims 1 - 20, provides:

23   "[A]n XML parser for inputting XML event strings which constitute an XML document

24   to be processed, and an XPath evaluating unit for executing evaluation of the XPath by

25   streaming processing are provided. This XPath evaluating unit serially evaluates the

26   XPath with respect to the respective XML events transferred from the XML parser, and

27   retains information concerning a result of partial evaluation of this XPath when the XPath

28   is partially established for a given XML event. Then, when the last step of this XPath is

29   established, the XPath is judged as established for the XML document.

1   Thus the present invention is concerned with XML parsing for inputting XML event strings. It

2   serially evaluates the XPath with respect to the respective XML events transferred from the XML

3   parser.

4   Whereas, the cited art to Peng, Article entitled: "Xpath Queries on Streaming Data". The Peng

5   abstract reads:

6   We present the design and implementation of the XSQ system for querying streaming

7   XML data using XPath 1.0. Using a clean design based on a hierarchical arrangement of

8   pushdown transducers augmented with buffers, XSQ supports features such as multiple

9   predicates, closures, and aggregation. XSQ not only provides high throughput, but is also

10   memory efficient: It buffers only data that must be buffered by any streaming XPath

11   processor. We also present an empirical study of the performance characteristics of XPath

12   features, as embodied by XSQ and several other systems.

13 Thus, Peng is concerned with design and implementation of the XSQ system for querying

14 streaming XML data using XPath 1.0. Although Peng does parsing, evaluating etc., Peng is not

15 concerned parsing when serially evaluating the XPath with respect to the respective XML events

16 transferred from the XML parser. Examiner is apparently using personal knowledge to use and

17 form elements into Peng that do not exist, automaton etc., that were not alluded to and were not a

18 concern to Peng. Thus claims 1-20 are not anticipated by Pang, and are allowable.

19   ***With respect to claim 1***, *Peng discloses an extensible-markup-language Path Language*
20   *(XPath) evaluating method for evaluating the XPath relevant to an extensible-*
21   *markup-language (XML) document by use of a computer, the Xpath evaluating method*
22   *comprising:*

23 In response, the applicants respectfully state that exception is taken with the alleged equivalencies

24 of the elements of claim 1 and Peng. Firstly, a review of Peng is not concerned with, does not

25 allude to or anticipate and fails to "discloses an extensible-markup-language Path Language

26 (XPath) evaluating method for evaluating the XPath relevant to an extensible- markup-language

27 (XML) document by use of a computer." The first sentence of the second paragraph of Peng

28 reads, "[W]e address the problem of evaluating XPath queries over streaming XML [23]. Claims

29 1-20 are not concerned with, does not allude to or anticipate "evaluating XPath queries."

1 Claim 1 is an XPath evaluating method for evaluating an XPath while subjecting an XML

2 document to streaming processing. Peng does 'evaluating', but does not allude and does not

3 present an 'evaluating method'. Claim 1 reads:

4   1. (Currently amended) An extensible-markup-language Path Language (XPath)

5   evaluating method comprising evaluating the XPath relevant to an

6   extensible-markup-language (XML) document by use of a computer, the step of

7   evaluating XPath comprising:

8   a first step of serially inputting XML event strings constituting an XML document

9   to be processed;

10   a second step of serially evaluating the XPath respectively relevant to the inputted

11   XML events while subjecting the XML document to streaming processing and retaining

12   information concerning a result of partial evaluation of the XPath in given storing means

13   when the XPath is partially established with respect to a given XML event; and

14   a third step of repeating the partial evaluation of the XPath along with the input of

15   the XML event strings while considering the result of the partial evaluation retained in the

16   storing means and evaluating that the XPath is established with respect to the XML

17   document when the last part of the XPath is established.

18 Peng does not allude to or anticipate "evaluating the XPath relevant to an

19 extensible-markup-language (XML) document."

20 The office communication continues:

21   *a first step of serially inputting XML event strings constituting an XML document*
22   *to be processed (page 433, 2nd paragraph of [2.1]. 1st paragraph of [3.1], "accepts*
23   *XML streams" which is "sequence of SAX events");*

24 Applicants respectfully state that exception is also taken with this office communication

25 statement. A review of the referenced portions fail to show the alleged equivalency. Pang, page

26 433, 2nd paragraph of [2.1] reads:

1   "The streaming XML data is modeled as a sequence of SAX events, extended with the depth of

2   the event. That is, an XML stream is a sequence $\{e_i, e_2, ... e_1, ...\}$ where $e_i cBuTuE$."

3   Pang, page 433, 1st paragraph of [3.1], *reads:*

4   "First we introduce a PDA that accepts XML streams that have certain string. Figure 4(a)

5   shows the state transition diagram of a PDA that accepts the XML stream in Figure 1. Text

6   events that are not shown in the diagram map to self-transitions."

7   These citations are not anticipation of a step of "serially inputting XML event strings constituting

8   an XML document to be processed."

9   The office communication continues:

10   *a second step of serially evaluating the XPath respectively relevant to the inputted*
11   *XML events (page 433, 1st of [3.]) and retaining information concerning a result of*
12   *partial evaluation of the XPath in given storing means when the XPath is partially*
13   *established woth respect to a given XML event (example 1 and last paragraph of page*
14   *432, when author element in input stream is encountered, Xpath is evaluated, and it*
15   *satisfied the path /pub/book/author. However, book element, author elements are*
16   *buffered to wait for later input stream events process); and*

17   Applicants respectfully state that exception is taken with the office communication statement. A

18   review of the referenced portions fail to show the alleged equivalency. Pang, page 433, 1st of [3.

19   reads:

20   "A pushdown transducer (PDT) is a pushdown automaton (PDA) with actions defined along

21   with the transition arcs on the automaton. It has a finite set of states which includes a start state

22   and a set of final states, a set of input symbols, and a set of stack symbols. At each step, it fetches

23   an input symbol from the input sequence. Based on the input symbol and the symbols in the stack,

24   it changes the current state and operates the stack according to the transition function. Besides

25   the state transition and stack operation, the transition function also defines an output operation

26   which could generate some output during the transition. Note that traditional PDTs do not have

27   an extra buffer and the operations for the buffer. However, as discussed in Section 1, evaluating

28   XPath queries over XML streams requires buffering potential results.

1   Also, Example 1, makes no allusion to the second step "serially evaluating the XPath respectively

2   relevant to the inputted XML events while subjecting the XML document to streaming processing

3   and retaining information concerning a result of partial evaluation of the XPath in given storing

4   means when the XPath is partially established ~~woth~~ with respect to a given XML event."

5   Peng is not concerned with, does not allude to or anticipate "serially evaluating' anything. Peng is

6   not concerned with, does not allude to or anticipate "inputted XML events while subjecting the

7   XML document to streaming processing."

8   Peng is not concerned with, does not allude to or anticipate "retaining information concerning a

9   result of partial evaluation of the XPath."

10   Peng is not concerned when any "XPath is partially established with respect to a given XML

11   event. Peng is not concerned with, does not allude to or anticipate the 2nd step.

12   Thus, Peng fails to anticipate this step either.

13   The office communication continues:

14   *a third step of repeating the partial evaluation of the Xpath along with the input*

15   *of the XML event strings while considering the result of the partial evaluation retained in*

16   *the storing means and evaluating that the XPath is established with respect to the XML*

17   *document when the Last part of the XPath is established (example 1 and last paragraph*

18   *of page 432, along with the input stream of events like price, author,...end of second*

19   *book, evaluating the Xpath "/pub[year=2000]/book[price<11]/author" is established).*

20   In response, the applicants respectfully state that exception is also taken with this office

21   communication statement. A review of the referenced portions fail to show the alleged

22   equivalency. Pang, example 1, starts with and reads:

23   EXAMPLE 1. *Consider the following query for the XML data in Figure 1:*

24   */pvMryear=2OO2J/bookrpriceC1J/at~thor.*   This is not related to the this 3rd step.

1   Pang, last paragraph of page 432, reads:

2   "As suggested by the example, we need to solve the following problems in order to evaluate

3   even this relatively simple query. First, we may encounter data that is potentially in the result be-

4   fore we encounter the items required to evaluate the predicates to decide its membership. We

5   need to buffer the potential result items. Second, items in the buffer have to be marked separately

6   so that, after the evaluation of a predicate, we can process only the items that are affected by the

7   predicate. Third, we have to encode the logic of the predicates in the automaton. In the above

8   example, only when all the price children fail to satisfy the predicate (and we reach the end of the

9   book element) does the book element fail to satisfy the predicate. In the mean time, if one of the

10   children satisfies the predicate, we should know that the predicate is true and perform the

11   operations accordingly. Finally, predicates access different portions of the data. Some should be

12   evaluated when the begin tag is encountered, while others should be evaluated upon encountering

13   the text content. There are other forms of predicates, which will be ... "

14   So, neither of referenced Pang portions are concerned with, do not allude to and do not anticipate

15   this third step. Peng is not concerned with, does not allude to or anticipate any "partial

16   evaluation."

17   Peng is not concerned with, does not allude to or anticipate "evaluation of the XPath along with

18   the input of the XML event strings."

19   Peng is not concerned with, does not allude to or anticipate "considering the result of the partial

20   evaluation retained in the storing means."

21   Peng is not concerned with, does not allude to or anticipate "evaluating that the XPath is

22   established with respect to the XML document when the last part of the XPath is established."

23   Peng is certainly not concerned with, does not allude to or anticipate a "step of repeating the

24   partial evaluation of the XPath along with the input of the XML event strings while considering

1   the result of the partial evaluation retained in the storing means and evaluating that the XPath is

2   established with respect to the XML document when the last part of the XPath is established.

3   Thus Peng is not concerned with, does not allude to or anticipate the steps of claim 1, and claim 1

4   and all claims that depend on claim 1 are allowable over the cited art.

5   *Claim 2 is rejected for the reasons set forth hereinabove for claim 1 and furthermore*

6   *Peng teaches the Xpath evaluating method wherein the second step includes the steps of:*

7   *generating an automaton for expressing the XPath to be evaluated (page 432, 6th*

8   *paragraph of column 1, generate the hierarchical pushdown automaton corresponding to*

9   *an XPath query); and evaluating the Xpath partially by allowing transition of a state of*

10   *the automaton based on inputted respective XML events and retaining a result of the*

11   *partial evaluation as the state of the automaton (page 433, 1st paragraph of [3.]).*

12   In response, the applicants respectfully state that exception is also taken with this office

13   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

14   not allude to or anticipate Claim 1. Peng also is also not concerned with, does not allude to or

15   anticipate Claim 2, which reads:

16   2. The XPath evaluating method according to claim 1,

17   wherein the second step includes the steps of:

18   generating an automaton for expressing the XPath to be evaluated; and

19   evaluating the XPath partially by allowing transition of a state of the automaton

20   based on inputted respective XML events and retaining a result of the partial evaluation as

21   the state of the automaton.

22   Peng does not have an Xpath evaluating method. A review of the referenced portions fail to

23   show the alleged equivalency. Pang, (page 432, 6th paragraph of column 1, apparently does not

24   allude to "generate the hierarchical pushdown automaton corresponding to an XPath query."

25   Pang reads:

26   • All the methods described in this paper are fully implemented in the XSQ system, which

27   will be released under the GNU GPL license. In addition to serving as a testbed for further

28   work on this topic, our system should be useful to anyone building systems for languages

29   that include XPath (e.g., XQuery, XSLT).

1   The rest of this paper is organized as follows. In the rest of this section, we use

2   examples to highlight some of the difficulties in evaluating XPath queries over XML

3   streams. Some preliminaries, including the SAX data model and the XPath language, are

4   covered in Section 2. The design of a basic pushdown transducer (BPDT), which

5   corresponds to an XPath location step, is presented in Section 3. Section 4 describes our

6   method for composing BPDTs to generate the hierarchical pushdown automaton (HPDT)

7   corresponding to an XPath query. Related work is summarized Section 5. Section 6

8   presents some results from our empirical study of XSQ and related systems. We conclude

9   in Section 7."

10   This doesn't mention 'automaton' or "generating an automaton for expressing the XPath to be

11   evaluated."

12   Pang (page 433, 1st paragraph of [3.]), copied above, does not allude to or anticipate a step of

13   "evaluating the Xpath partially by allowing transition of a state of the automaton based on

14   inputted respective XML events and retaining a result of the partial evaluation as the state of the

15   automaton." Thus claim 2 is allowable over Peng for itself and because it depends on claim 1.

16   *Claim 3 is rejected for the reasons set forth hereinabove for claim 1 and furthermore*
17   *Peng discloses the Xpath evaluating method wherein the second step includes the steps*
18   *of: generating a first stack which expresses the Xpath to be evaluated with a string of*
19   *stack elements (page 433. 1st paragraph of [3.], "a set of stack symbols"); and generating*
20   *a second stack for analyzing a nested structure of the XML document ("a set of input*
21   *symbols") to be processed based on respective inputted XML events and then evaluating*
22   *the XPath partially by comparing the first stack with the second stack (page 433, 1st*
23   *paragraph of [3.], lines 5-10).*

24   In response, the applicants respectfully state that exception is also taken with this office

25   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

26   not allude to or anticipate Claim 1. Peng also is also not concerned with, does not allude to or

27   anticipate Claim 3. A review of the referenced portions fail to show the alleged equivalency.

28   Peng is not concerned with, does not allude to or anticipate a step of "generating a first stack

29   which expresses the XPath to be evaluated with a string of stack elements."

1   Peng is not concerned with, does not allude to or anticipate a step of "generating a second stack

2   for analyzing a nested structure of the XML document to be processed based on respective

3   inputted XML events and then evaluating the XPath partially by comparing the first stack with the

4   second stack."

5   Thus claim 3 is allowable over Peng for itself and because it depends on claim 1.

6   *Claim 4 is rejected for the reasons set forth hereinabove for claim 1 and furthermore*
7   *Peng teaches the Xpath evaluating method wherein the second step includes the steps of:*
8   *serially constructing a document tree indicating a document structure of the XML*
9   *document to be processed based on input of respective XML events (page 436, 1st*
10   *paragraph of [4.], "hierarchical pushdown transducer (HPDT), in form of a binary tree;*
11   *figure 11 and 1st paragraph of [4.2], build an HPDT from an Xpath query); and*
12   *evaluating the XPath along with construction of the document tree by use of the*
13   *document tree including a part which has been constructed (figures 5-11, and example 5,*
14   *page 436, 1st of [4.2]).*

15   In response, the applicants respectfully state that exception is also taken with this office

16   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

17   not allude to or anticipate Claim 1, or any partial evaluation of an XPath. Peng also is also not

18   concerned with, does not allude to or anticipate Claim 4. A review of the referenced portions fail

19   to show the alleged equivalency.

20   Peng is not concerned with, does not allude to or anticipate a step of "serially constructing a

21   document tree indicating a document structure of the XML document to be processed based on

22   input of respective XML events."

23   Peng is not concerned with, does not allude to or anticipate a step of "evaluating the XPath along

24   with construction of the document tree by use of the document tree including a part which has

25   been constructed.

26   Thus claim 4 is allowable over Peng for itself and because it depends on claim 1.

__With respect to claim 5__, Pang discloses an XPath evaluating apparatus comprising: an evaluation executing unit for inputting XML event strings constituting an XML document and serially evaluating the XPath with respect to each of XML events! while retaining information concerning a result of partial evaluation of the XPath when the XPath is partially established with respect to a given XML event, and evaluating that the XPath is established with respect to the XML document when the last step of the XPath is established (page 433, 1st of [3], "Basic Pushdown Transducer"); and an XML event transferring unit for inputting the XML event strings constituting the XML document to be processed and serially transferring the XML event strings to the evaluation executing unit (page 433. [2.1], "SAX parser").

In response, the applicants respectfully state that exception is also taken with this office communication statement. Firstly, it was shown that Peng is certainly not concerned with, does not allude to or anticipate Claim 1, or any partial evaluation of an XPath. Peng also is also not concerned with, does not allude to or anticipate Claim 5. Claim 5 is an apparatus claim equivalent of method claim 1. As with claim 1, a review of the referenced portions fail to show the alleged equivalency.

Peng is not concerned with, does not allude to or anticipate an element of " an evaluation executing unit" or an XML event transferring unit as in claim 5. Thus claim 5 is allowable over Peng.

__Claim 6__ is rejected for the reasons set forth hereinabove for claim 5 and furthermore Peng teaches the XPath evaluating apparatus, further comprising: an automaton generating unit for generating an automaton which expresses the XPath to be evaluated (page 433, 1st of [3], "pushdown transducer"), wherein the evaluation executing unit performs partial evaluation of the XPath by allowing a state of the automaton generated by the automaton generating unit to perform transition based on the XML events transferred from the XML event transferring unit, and retains a result of the partial evaluation as the state of the automaton (page 433 1st paragraph of [3.]).

In response, the applicants respectfully state that exception is also taken with this office communication statement. Firstly, it was shown that Peng is certainly not concerned with, does not allude to or anticipate Claim 1. Peng also is also not concerned with, does not allude to or anticipate Claims 5 or 6. A review of the referenced portions fail to show the alleged equivalency.

1   Peng is not concerned with, does not allude to or anticipate an element of an automaton

2   generating unit as in claim 6.

3   Thus claim 6 is allowable over Peng for itself and because it depends on claim 5.

4   ***Claim 7*** *is rejected for the reasons set forth hereinabove for claim 5 and furthermore*
5   *Peng teaches the Xpath evaluating apparatus, further comprising: a stack generating*
6   *unit for generating a first stack which expresses the XPath to be evaluated with a string*
7   *of stack elements (page 433, 1st paragraph of [3.], "a set of stack symbols"), wherein the*
8   *evaluation executing unit performs partial evaluation of the XPath by generating a*
9   *second stack for analyzing a nested structure of the XML document subject to processing*
10   *based on the XML events transferred from the XML event transferring unit and then*
11   *comparing the first stack generated by the stack generating unit with the second stack*
12   *(page 433, 1st paragraph of [3.]. [3.1]).*

13   In response, the applicants respectfully state that exception is also taken with this office

14   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

15   not allude to or anticipate Claim 1, or any partial evaluation of an XPath. Peng also is also not

16   concerned with, does not allude to or anticipate Claim 7. A review of the referenced portions fail

17   to show the alleged equivalency.

18   Peng is not concerned with, does not allude to or anticipate an element of a stack generating unit

19   for generating a first stack which expresses the XPath to be evaluated with a string of stack

20   element. Peng is not concerned with, does not allude to or anticipate an "evaluation executing

21   unit performs partial evaluation of the XPath by generating a second stack for analyzing a nested

22   structure of the XML document subject to processing based on the XML events transferred from

23   the XML event transferring unit and then comparing the first stack generated by the stack

24   generating unit with the second stack."

25   Thus claim 7 is allowable over Peng for itself and because it depends on claim 5.

26   ***With respect to claim 8***, *Peng teaches an Xpath evaluating apparatus comprising: a*
27   *document tree constructing unit for inputting XML event strings which constitute an XML*
28   *document and serially constructing a document tree indicating a document structure of*

1   *the XML document based on inputted XML events along with the input of the respective*
2   *XML events (page 434, [3.2], "building the BPDT with figure 5-9); an XML event*
3   *transferring unit for inputting the XML event strings which constitute the XML document*
4   *to be processed and serially transferring the XML event strings to the document tree*
5   *constructing unit (page 433. [2.1]. "SAX parser"); and an evaluation executing unit for*
6   *evaluating the XPath along with construction of the document tree by the document tree*
7   *constructing unit, using the document tree with a part which has been constructed (page*
8   *436, 1st paragraph of [4.]. "hierarchical pushdown transducer (HPDT), in form of a*
9   *binary tree"; figure 11, and 1st paragraph of [4.2], build an HPDT from an Xpath*
10   *query).*

11   In response, the applicants respectfully state that exception is also taken with this office

12   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

13   not allude to or anticipate Claim 1, or any partial evaluation of an XPath. Peng also is also not

14   concerned with, does not allude to or anticipate Claim 8. A review of the referenced portions fail

15   to show the alleged equivalency.

16   Peng is not concerned with, does not allude to or anticipate an "XPath evaluating apparatus of

17   claim 8. Peng is not concerned with, does not allude to or anticipate "a document tree

18   constructing unit, for inputting XML event strings which constitute an XML document and

19   serially constructing a document tree indicating a document structure of the XML document

20   based on inputted XML events along with the input of the respective XML events while

21   subjecting the XML document to streaming processing."

22   Peng is not concerned with, does not allude to or anticipate "an XML event transferring unit"

23   "employed for inputting the XML event strings which constitute the XML document to be

24   processed and serially transferring the XML event strings to the document tree constructing unit.

25   Peng is not concerned with, does not allude to or anticipate the evaluation executing unit of claim

26   8. Thus claim 8 is allowable over Peng.

27   *Claim 9 is rejected for the reasons set forth hereinabove for claim 8 and furthermore*
28   *Peng teaches the XPath evaluating apparatus, wherein the evaluation executing unit*
29   *retains information concerning a result of partial evaluation of the XPath when the*

1   *XPath is partially established upon the evaluation of the XPath using the document tree*
2   *(page 434, [3.3], "Buffer operation in BPDT").*

3   In response, the applicants respectfully state that exception is also taken with this office

4   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

5   not allude to or anticipate Claims 1 and 8, or any partial evaluation of an XPath. Peng also is also

6   not concerned with, does not allude to or anticipate Claim 9. A review of the referenced portions

7   fail to show the alleged equivalency.

8   Peng is not concerned with, does not allude to or anticipate a limitation "wherein the evaluation

9   executing unit retains information concerning a result of partial evaluation of the XPath when the

10   XPath is partially established upon the evaluation of the XPath using the document tree."

11   Thus claim 9 is allowable over Peng for itself and because it depends on claim 8.

12   **With respect to claim 10**, *Peng teaches an information processing apparatus*
13   *comprising: an XML parser for analyzing an XML document to be processed and thereby*
14   *generating XML event strings (page 433,[12.1]); an XPath evaluating unit for serially*
15   *inputting the XML event strings generated by the XML parser and evaluating the Xpath*
16   *with respect to each of inputted XML events by streaming processing (page 433, 1st of*
17   *[3.], "PDA"); and an application executing unit for inputting the XML events generated*
18   *by the XML parser and performing processing with respect to the XML document*
19   *configured by the XML events in response to an evaluation result of the XPath by the*
20   *Xpath evaluating unit (page 434, [3.2], "building the BPDT"), wherein the XPath*
21   *evaluating, unit serially evaluates the XPath with respect to each of the XML events,*
22   *retains information concerning a result of partial evaluation of the XPath when the*
23   *XPath is partially established with respect to a given XML event, and judges that the*
24   *XPath is established with respect to the XML document when the last step of the XPath is*
25   *established.*

26   In response, the applicants respectfully state that exception is also taken with this office

27   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

28   not allude to or anticipate Claim 1, or any partial evaluation of an XPath. Peng also is also not

29   concerned with, does not allude to or anticipate Claim 10. A review of the referenced portions

30   failed to show the alleged equivalency.

1   Peng is not concerned with, does not allude to or anticipate a combination of elements as in claim

2   10. Peng does not combine and/or does not have an XML parser, an XPath evaluating unit and

3   an application executing unit of claim 10.

4   Peng is not concerned with, does not allude to or anticipate an apparatus wherein an "XPath

5   evaluating unit serially evaluates the XPath with respect to each of the XML events, retains

6   information concerning a result of partial evaluation of the XPath when the XPath is partially

7   established with respect to a given XML event, and judges that the XPath is established with

8   respect to the XML document when the last step of the XPath is established."

9   Thus claim 10 is allowable over Peng.

10   *Claim 11 is rejected for the reasons set forth hereinabove for claim 10 and furthermore*
11   *Peng teaches the information processing apparatus, wherein the XPath evaluating unit*
12   *generates an automaton for expressing the XPath to be evaluated, performs partial*
13   *evaluation of the Xpath by allowing transition of a state of the automaton based on the*
14   *XML events generated by the XML parser, and retains a result of the partial evaluation*
15   *as the state of the automaton (example 1 and last paragraph of page 432, when author*
16   *element in input stream is encountered, Xpath is evaluated, and it satisfied the path*
17   *(pub/book/author. However, book element, author elements are buffered to wait for later*
18   *input stream events process).*

19   In response, the applicants respectfully state that exception is also taken with this office

20   communication statement. Firstly, it was shown that Peng is certainly not concerned with, does

21   not allude to or anticipate Claim 10, or any partial evaluation of an XPath. Peng also is also not

22   concerned with, does not allude to or anticipate Claim 11. A review of the referenced portions

23   fail to show the alleged equivalency.

24   Peng is not concerned with, does not allude to or anticipate a limitation of "wherein the XPath

25   evaluating unit generates an automaton for expressing the XPath to be evaluated."

26   Peng is not concerned with, does not allude to or anticipate a limitation of "performs partial

27   evaluation of the XPath by allowing transition of a state of the automaton based on the XML

1   events generated by the XML parser, and retains a result of the partial evaluation as the state of

2   the automaton."

3   Thus claim 11 is allowable over Peng for itself and because it depends on claim 10.

4   *Claim 12 is rejected for the reasons set forth hereinabove for claim 10 and furthermore*
5   *Peng teaches the information processing apparatus, wherein the XPath evaluating unit*
6   *generates a first stack which expresses the XPath to be evaluated with a string of stack*
7   *elements, generates a second stack for analyzing a nested structure of the XML document*
8   *to be processed based on the XML events generated by the XML parser, and performs*
9   *partial evaluation of the XPath by then comparing the first stack with the second stack*
10   *(page 433, 1st paragraph of [3.], lines 5-10).*

11   In response, the applicants respectfully state that it was shown that Peng does not anticipate claim

12   10. Peng does not anticipate claim 12. Peng is not concerned with, does not allude to or

13   anticipate a limitation of "wherein the XPath evaluating unit serially constructs a document tree

14   indicating a document structure of the XML document to be processed based on inputted XML

15   events along with the input of the respective XML events generated by the XML parser, and

16   evaluates the XPath by use of the document tree with a part which has been constructed."

17   Thus claim 12 is allowable over Peng for itself and because it depends on claim 10.

18   *Claim 13 is rejected for the reasons set forth hereinabove for claim 10 and furthermore*
19   *Peng teaches the information processing apparatus, wherein the XPath evaluating unit*
20   *serially constructs a document tree indicating a document structure of the XML*
21   *document to be processed based on inputted XML events along with the input of the*
22   *respective XML events generated by the XML parser, and evaluates the XPath by use of*
23   *the document tree with a part which has been constructed (page 436, 1st paragraph of*
24   *[4.], "hierarchical pushdown transducer (HPDT), inform of a binary tree"; figure 11,*
25   *and 1st paragraph of 14.2], build an HPDT from an Xpath query).*

26   In response, the applicants respectfully state that it was shown that Peng does not anticipate claim

27   10. Peng does not anticipate claim 13. Peng is not concerned with, does not allude to or

28   anticipate a limitation of "wherein the XPath evaluating unit serially constructs a document tree

29   indicating a document structure of the XML document to be processed based on inputted XML

30   events along with the input of the respective XML events generated by the XML parser, and

1 evaluates the XPath by use of the document tree with a part which has been constructed." Thus

2 claim 13 is allowable over Peng for itself and because it depends on claim 10.

3   ***Claim 14*** *is rejected on grounds corresponding to the reasons given above for claim 1.*
4   *The claim 1 claims limitations of the XPath evaluating method while the claim 14 claims*
5   *limitations of a program causing the computer to execute the procedure for carrying out*
6   *the steps of claim 1.*

7 In response, the applicants respectfully state that indeed as with claim 1, claim 14 for a program

8 to do the steps of claim 1 is allowable because it depends on allowable claim 1.

9   ***Claim 15*** *is rejected on grounds corresponding to the reasons given above for claim 1.*
10   *The claim 1 claims limitations of the XPath evaluating method while the claim 15 claims*
11   *limitations of an article of manufacture comprising computer readable program code*
12   *moans for causing a computer to effect the steps of claim 1.*

13 In response, the applicants respectfully state that indeed as with claim 1, claim 1 for an article of

14 manufacture to do the steps of claim 1 is allowable because it depends on allowable claim 1.

15   ***Claim 16, and 17*** *are rejected on grounds corresponding to the reasons given above for*
16   *claim 1. The claim 1 claims limitations of the XPath evaluating method while the claims*
17   *16, 17 claim limitations of a program storage device readable by machine to perform the*
18   *steps of claim 1.*

19 In response, the applicants respectfully state that indeed as with claim 1, claims 16 and 17 for a

20 program storage device to do the steps of claim 1 is allowable because it depends on allowable

21 claim 1.

22   ***Claim 18*** *are rejected on grounds corresponding to the reasons given above for claim*
23   *5. The claim 5 claims limitations of the XPath evaluating apparatus while the claim 18*
24   *claims limitations of a computer program product for causing a computer to effect the*
25   *Xpath evaluating apparatus of claim 5.*

26 In response, the applicants respectfully state that indeed as with claim 5, claim 18 for a program

27 product to do the functions of claim 5 is allowable because it depends on allowable claim 5.

28   ***Claim 19*** *are rejected on grounds corresponding to the reasons given above for claim*
29   *9. The claim 8 claims limitations of the XPath evaluating apparatus while the claim 19*

1　　　*claims limitations of a computer program product for causing a computer to effect the*
2　　　*Xpath evaluating apparatus of claim 8.*

3　　In response, the applicants respectfully state that indeed as with claim 8, claim 19 for a program

4　　product to do the functions of claim 8 is allowable because it depends on allowable claim 8.

5　　　***Claim 20*** *are rejected on grounds corresponding to the reasons given above far claim*
6　　　*10. The claim 10 claims limitations of the information processing apparatus while the*
7　　　*claim 20 claims limitations of a computer program product for causing a computer to*
8　　　*effect the information processing apparatus of claim 10.*

9　　In response, the applicants respectfully state that indeed as with claim 10, claim 20 for a program

10　　product to do the functions of claim 10 is allowable because it depends on allowable claim 10.

11　　It is anticipated that this amendment brings claims 1-20. If any questions remain, please call the

12　　undersigned before issuing a FINAL office communication.

13　　Please charge any fee necessary to enter this paper to deposit account 50-0510.

14　　　　　　　　　　　　　　　　　　　　　　Respectfully submitted,

15　　　　　　　　　　　　　　　By: _____
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